

# News and Notes

## Fiftieth Anniversary of the Explorers Club

The Medal of the Explorers Club was awarded to Brigadier Sir John Hunt and also to Dr. Auguste Piccard on Mar. 19 at the 50th Anniversary Dinner of the Explorers Club held in New York. Almost 1000 were in attendance to witness the bestowals and a varied program presenting exploration highlights of the year.

Sir John Hunt was accorded the club's highest honor because of his leadership of the successful Mount Everest Expedition of 1953. Dr. Piccard's medal bore the inscription, "Master of the Science of Exploring the Deep." Neither of the recipients was able to be present at the dinner, and the medals were transmitted, with their accompanying citations, through the British and Swiss Consul Generals, respectively. Tensing Norkay, the Sherpa who accompanied Sir Edmund Hillary to the summit of Mount Everest, was accorded honorary membership. Arrangements had been made for Tensing to attend the dinner in company with Prince Peter of Greece and Denmark, a distinguished Tibetan scholar who has been a member of the Explorers Club for some years, but unexpected circumstances prevented the journey. Sir Edmund Hillary had been accorded honorary membership in the Club a few weeks earlier at a special reception for him in New York.

Denmark's leading active explorer, Count Eigil Knuth, was honored with corresponding membership in recognition of his many years of scientific exploration in Greenland. The same honor was also conferred upon the two French divers, Lieutenant Commander Georges Houot and Naval Engineer (Lieut.) Pierre-Henri Willm, who on Feb. 15 broke the existing depth record. The two men flew from France to attend the celebration.

In addition to selections from the Everest films, the program included brief lectures by Serge Korff (cosmic-ray scientist) on the record altitude landing he and Terris Moore had made by plane on Mount Wrangell last summer; by Edward Weyer, Jr. (president of the club) on his one-man expedition to the primitive Indians of Mato Grosso, Brazil, last summer; by Russell Barnett Aitken, on African animals; and by Wernher von Braun on "Space travel—when?"

A feature of the evening was a toast drunk by the toastmaster, Lowell Thomas, and the two arctic explorers Peter Freuchen and Matthew Henson to their absent comrade Ootah, the last remaining Eskimo to have accompanied Peary to the North Pole, whose health at the last minute prevented him from flying to New York for the anniversary. The toast was drunk in a beverage cooled by a piece of ice from the famous Ice Island. The ice had been brought from the arctic by Ernest W. Marshall, a member of the club who has

spent some months on Ice Island making scientific studies, which it is hoped will help explain its origin.

Perhaps the greatest public attention was aroused by the "Explorers smorgasbord," which preceded the dinner. It included several score of exotic items, ranging from fried termites to turtle eggs and walrus meat.

The Explorers Club was organized in 1904 when a small group of men active in exploration met at the request of Henry Collins Walsh to form an organization with the object of uniting explorers in the bonds of good fellowship and of promoting the work of exploration. In 1913 the Explorers Club took upon its rolls all the members of the Arctic Club, to which it had sublet quarters and to which it was closely allied through a duplication of memberships. Today the Explorers Club embraces more than 900 members, many of whom are living in far parts of the world.

EDWARD WEYER

*American Museum of Natural History  
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## June Meeting of Pacific Division, AAAS

The 35th annual meeting of the Pacific Division of the AAAS will be held on the campus of the State College of Washington at Pullman, June 21-26. Societies or regional sections of societies affiliated or associated with the AAAS that have scheduled sessions at Pullman include the American Meteorological Society, American Nature Study Society, American Society for Horticultural Science, American Society of Ichthyologists and Herpetologists, American Society of Limnology and Oceanography, American Society of Plant Physiologists, Association of Pacific Coast Geographers, Botanical Society of America, Cooper Ornithological Society, Ecological Society of America, Northwest Scientific Association, Pacific Northwest Bird and Mammal Society, Society of Systemic Zoology, Western Society of Naturalists, and Western Society of Soil Science. The American Society of Agronomy, Western Branch, will also meet with the AAAS at Pullman.

Two evening addresses are planned for general sessions of the meetings. Alfred S. Romer, director of the Museum of Comparative Zoology, Harvard University, will speak on "Redbeds fossils and vertebrate evolution." A. H. Sturtevant, of the California Institute of Technology and president of the Pacific Division of the AAAS, will discuss "Social implications of the genetics of man."

Six societies have scheduled one or more field trips each. These are the American Nature Study Society, American Society of Agronomy, American Society for Horticultural Science, Association of Pacific Coast Geographers, Ecological Society of America, and Western Society of Soil Science. Other excursions and

shorter unscheduled trips to a wide selection of scenic attractions and hydroelectric, irrigation, mining, and other developments in the eastern Washington-Oregon-Idaho-Montana area near Pullman are available to interested delegates.

## Annual Meeting of the Radiological Society of North America

THE 39th Annual Meeting of the Radiological Society of North America was held in Chicago, Dec. 13-18, 1953. Some of the outstanding papers were:

"The Doctor and His Heart," by *Frederick W. Fitz*. Medical discoveries within the past decade have decidedly altered once current concepts of heart disease. Emphasis was directed on how the doctor can avoid his first coronary or, if he has had it, what he and his physician can and should do.

"The Significance of Variations of the Cardiac Circulation Time From Angiocardiographic Studies," by *Melvin M. Figley*. Rapid, regular serial filming during angiocardiography makes it possible to time the duration and intensity of opacification of the several cardiac chambers and vessels.

"Studies on Intro-cavitary Administration of Chromic Phosphate Containing P<sup>32</sup>," by *Samuel W. Root, Malcolm P. Tyor, Gould Andrews, and Ralph M. Kniseley*. Radioactive chromic phosphate has been used by intracavitary injection in an effort to control ascites and pleural effusions caused by malignant neoplasms.

"Supervoltage Diagnostic Roentgenology," by *William J. Tuddenham, John Hale, John F. Gibbons, and Eugene P. Pendergrass*. The theoretical considerations that lead to the exploration of very high voltage technics in an effort to increase the accuracy of the roentgen diagnosis of chest disease.

"Radiologist's Role in Pulmonary Resection," by *Carl C. Birkelo*. The study of 200 or more cases carefully reviewed with a radiologic opinion before pulmonary resection, plus an operative opinion by the surgeon at the time of resection.

"Chest Survey: A Symposium Discussion," by *L. Henry Garland, Gilbert H. Marquardt, Theodore J. Wachowski, Ray E. Brown, Edwin R. Levine, and Robin Buerki*. Does the increasing incidence of bronchogenic carcinoma warrant perhaps even further consideration of chest surveys as a prophylactic measure to combat the asymptomatic progression of this disease to an inoperable state?

"Kerosene Poisoning in Infants and Children," by *Joseph C. Foley, A. Bradley Soule, Jr., Nicholas B. Dreyer, and Ephraim Woll*. The accidental ingestion of kerosene is relatively common in rural medical practice, as indicated by this study of 101 children, all under the age of 2 yr, who were examined and treated in five hospitals in northwestern Vermont over a period of 7 yr. The salient features of kerosene intoxication were described on the basis of observations made of these cases and others reported in the literature. There was also a report on experimental work on animals following intratracheal and intragastric administration of varying amounts of kerosene.

"Bleeding Lesions of the Intestinal Tract in Infants and Children," by *John R. Hodgson, and Roger L. J. Kennedy*. Bleeding from the gastrointestinal tract in infants and children is caused in part by the same lesions that produce bleeding in adults. There are, however, cer-

tain definite differences in etiology in infants and children.

"Experimental Studies on Recovery from Radiation Injury," by *Leon O. Jacobson*. Evidence has continued to accumulate indicating that the institution of therapeutic measures after total body exposure of experimental animals to ionizing radiations will reduce mortality and morbidity. The published and unpublished data tend to support the hypothesis that cells of the shielded tissue, tissue transplant, or injected cell preparations produce a substance or group of substances essential to the recovery of cells and cellular systems inhibited by irradiation.

"Experimental Studies on Late Effects of Nuclear Detonation," by *Jacob Furth, Arthur C. Upton, Kenneth W. Christenberry, and Walter H. Benedict*. The late effects of massive whole body irradiation from nuclear detonation of a large population of genetically uniform young adult mice will be surveyed about 2½ yr after exposure. The alterations thus observed were related to known human events.

"Angiography in the Evaluation of Intracranial Trauma," by *James E. Lofstrom and John E. Webster*. The paper embraced the fundamental background of the problems in correctly diagnosing the presence and absence of intracranial hematomata following trauma, together with an evaluation of the indications for the use of carotid arteriography in the localization of such lesions.

"Improved Control of Inoperable Oral Cancer with Massive Roentgen Therapy," by *George White, William R. Christensen, and James Sieniewicz*. Preliminary investigation at Pondville Hospital has shown that advanced inoperable intra-oral cancer could not be controlled when less than 7000 r was delivered to the primary disease. Marked improvement in primary control was obtained when over 7000 r was delivered to the tumor, using an intra-oral portal and multiple external fields.

"Irradiation Therapy in Hodgkin's Disease," by *Charles Nice and K. Wilhelm Stenstrom*. The extent of involvement when the patient is first seen is probably the most important factor in the prognosis of Hodgkin's Disease. The most interesting finding in a statistical study of Hodgkin's disease, treated with irradiation at the University of Minnesota Hospitals, is the significant differences in 5- and 10-yr survival figures obtained in three clinical stages.

"Surgery and Radiation of Cancer in the Female Breast," by *Frederick W. O'Brien, Sr. and Frederick W. O'Brien, Jr.* A revaluation of both surgery and radiation in the treatment of cancer of the breast seems impelling because of recently advocated surgical procedures and the progressively higher radiation intensities now available.

"Low Back Pain," a panel discussion, by *John Winston, Robert D. Moreton, Charles L. Ewing, E. M. Potter, J. R. Norcross, and (presiding) Earl E. Barth*. Since x-ray investigation of the low-back area shows that a relatively few persons have an entirely normal spine, a classification of the expected pathologies of that area was worked out. The incidence of some of the more frequent conditions, usually felt to be on a congenital basis, of the lower lumbar spine in men who have passed pre-employment physical examinations was considered. The impact of methods, procedures and, reports of radiologists on personal injury litigation with specific examples of their effect on the ultimate disposition of such cases was discussed, and the final presentation showed how a few simple differential points between spondylolisthesis resulting from isthmus defect and that resulting from erosive changes at the facets were demonstrated on lateral roentgenograms of the spine.

"Internally Administered Radioisotopes," by *Leonidas D. Marinelli*. The evaluation of the dose in tissues containing radioisotopes is relatively simple in the case of homogenous concentrations. More difficult is the calculation of the boundaries, where knowledge of the dose as a function of distance from a point source is required.

"Physical Aspects of Rotating Telecobalt Equipment," by *Carl B. Braestrup* and *R. Mooney*. An experimental determination was made of the dose distribution and protection obtained with the kilocurie Moving Source Cobalt Equipment installed at the Francis Delafield Hospital. Isodose patterns were obtained for stationary fields and for typical rotation therapy problems.

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## Science News

The Joint Committee on Atomic Energy began hearings on H.R. 8862, a bill to revise the Atomic Energy Act of 1946, as amended, on May 3. Persons or organizations wishing the opportunity to appear before the Joint Committee should address requests to: Rep. Sterling Cole, Chairman, Joint Committee on Atomic Energy, The Capitol, Washington 25, D.C. Sessions are scheduled through May 17.

Robert E. Zinn and William F. Stevens, chemical engineers at the Technological Institute of Northwestern University, have demonstrated the commercial practicability of obtaining vitamin B-12 from sewage at a proving plant operated at the institute.

Research sponsored by the Milwaukee Sewerage Commission several years ago disclosed that the sludge called Milorganite, processed at the Municipal Sewage Disposal Plant for use as garden fertilizer, contained vitamin B-12. A method for extracting the vitamin was developed and patents covering it were assigned to the commission. Working from these patents, the two research men proved its possibilities for commercial production. The end-product of their proving plant is a vitamin B-12 concentrate of light tan color, resembling instant coffee in texture. It has an odor of caramelized sugar.

Participants in a meeting of the International Mars Committee held in Washington on Mar. 26 did not hold much hope of intelligent life on Mars. It would be a startling enough discovery, Harold Urey of the University of Chicago pointed out, to find positive proof even of plant life such as mosses and lichens. Most astronomers now agree that the seasonal color changes seen on the Martian surface are probably due to vegetation, but this is a "logical supposition," which they hope to prove this summer when the planet approaches within 40,000,000 mi of the earth. Finding the particular spectrum line made by chlorophyll would be the most likely proof, according to E. C. Slipher of the Lowell Observatory, Flagstaff, Ariz. Dr. Slipher is now in South Africa for a 9-mo photographic investigation of Mars using the 27-in refracting telescope of the Lamont Hussey Observatory at

Bloemfontein. The expedition is sponsored jointly by Lowell Observatory and the National Geographic Society. Studies are being conducted by the International Mars Committee at 17 astronomical observatories around the world during the next 6 mo.

The return of the first American Museum of Natural History expedition to South West Africa, made for the purpose of collecting mammals, birds, and anthropological specimens, has been announced. Led by Col. and Mrs. William J. Morden, the expedition covered over 11,000 mi of South West Africa, Bechuanaland, and the Belgian Congo, including some areas never before visited by Americans. Other members of the 8-mo field trip were George W. McClellan, general assistant, and Walter Hoesch, a resident of South West Africa who assisted in collecting birds and small mammals in that country. The group brought back the finest collections of mammals ever made in that part of the world by an American museum. Over 500 specimens, including giraffes, gemsbok, and an aardvark as well as smaller mammals, comprise a comprehensive cross section of the animal life of South West Africa.

Among the little-known areas visited by the expedition was the Kaokoveld, a desert area in the northwest corner of South West Africa that can be entered only with special permission of the government. Three men and an old woman were discovered there who claimed to be the only survivors of a lost nomadic tribe known as the Strandlopers. These people, relatives of the Bushmen, at one time lived along the barren shores of the Atlantic. Col. and Mrs. Morden found the Strandlopers living among the Hottentots on a government reservation and succeeded in photographing them.

Another unusual visit was that to famous Skeleton Coast, the site of many shipwrecks and the subject of a book by John Marsh; it was "a desert strewn with electric light bulbs and automobile tires—the remains of ships that had ventured too close to shore."

The expedition also gathered anthropological objects from people not previously represented in the Museum collections such as the Ovahimba and Sambiu tribes. Drums, masks, bowls, and ceremonial objects are included in the material brought back.

## Scientists in the News

Gordon Willard Allport, professor of psychology at Harvard University, delivered the Terry Lectures at Yale University this year on the topic "Becoming: three lectures on growth in personality." The series was established in 1905 to provide annual lectures on religion in the light of science and philosophy.

Henry K. Beecher, Dorr professor of research in anaesthesia, Harvard University, has been invited to give the Macarthur Lecture at Edinburgh and the Holme Lecture at the University College Hospital Medical School, London, this spring.

The following staff members at the National Bureau of Standards have each received a Department of Commerce Silver Medal for Meritorious Service:

**John A. Bennett**, for "very valuable contributions in the field of metallurgical science and technology, with particular reference to the mechanism of fatigue failures in metals, and for meritorious authorship."

**Harry A. Bright**, for "outstanding contributions in the general field of inorganic analysis, with particular reference to the preparation, analysis, and maintenance of standard samples."

**Charles A. Douglas**, for "a contribution of unusual value to aviation in the development of a recording transmissometer, which provides continuous and reliable information on atmospheric visibility at airfields."

**Saul R. Gilford**, for "very valuable contributions to electronic instrumentation in the field of biophysics."

**Peter H. Haas**, for "outstanding contributions in the field of magnetic measurements and standards at radio frequencies."

**Charles C. Hartman**, for "outstanding contributions for over 33 years in the chemistry and technology of organic coatings."

**Francis L. Hermach**, for "a very valuable contribution to standardization of electrical measurements in the development of a highly accurate transfer instrument for measurements."

**Arthur W. Holt**, for "a major contribution of unusual value to science and technology in the original design and construction of a new high-speed memory for electronic data processing machines."

**Donald Hubbard**, for "very valuable contributions to the science of the structure of glass, and for meritorious authorship."

**Vernon A. Lamb**, for "outstanding contributions and distinguished leadership in development engineering in the field of electrodeposition."

**Robert K-F Scal**, for "an outstanding contribution to electronic engineering in the development of a miniaturized airborne radar."

**Edward Allen Boyden**, head of the Anatomy Department at the University of Minnesota medical school, recently received a special tribute from his associates in observance of his 68th birthday. The tribute is the "Boyden Birthday Volume" of *The Anatomical Record*, a monthly journal for which he served as editor from 1928-48. The special volume will consist of four issues of the publication, January through April. Dr. Boyden's studies of the kidneys, gallbladder, and lungs have brought him international fame.

**Eugene Gudger**, internationally known scientist and former associate curator of fishes for the American Museum of Natural History, New York, has recently retired to his home town, Waynesville, N.C., after 34 yr of service at the museum. Dr. Gudger's education included 3 yr at Emory and Henry College, and B.S. and M.S. degrees from the University of Nashville. He taught in Asheville high school and college, and in 1895 went to Arkansas where he expanded the depart-

ment of science in the Little Rock high school. Then came the years at Johns Hopkins University where he earned the Ph.D. degree that had been his ambition for 18 yr. Fourteen years of teaching biology at the University of North Carolina Woman's College followed.

During this period he did much writing and research, always on fishes, and it was his knowledge of them that in 1919 brought him the call to the American Museum of Natural History in New York, where he went to edit the tremendous Index Volume of the *Bibliography of Fishes*; it contains about 50,000 citations, and forms perhaps the most carefully indexed and classified listing of its sort that there is. From this work he went on to the editorship of the *Bashford Dean Memorial Volume*, which was 10 yr in the making and probably stands by itself in American scientific work. Still later Dr. Gudger was instrumental in establishing The Dean Memorial Library for literature on fishes, and added the librarianship to his curatorial and research duties for the Museum.

Although most of Dr. Gudger's time through the years was devoted to learned papers—more than 320 of them—chiefly on what the layman would consider obscure fishes (for their very obscurity was often what intrigued him), he also amassed all sorts of odd facts about fishes and fishing. Occasionally he would publish a "popular" article in a semi-scientific magazine. A 2-volume set of these less technical articles has been bound and presented by Dr. Gudger's family to the Haywood County Library.

**Rufus Oldenburger** has been appointed director of research at the Woodward Governor Company, Rockford, Ill.

Two University of Chicago physicians have been appointed to "named" professorships. **Walter L. Palmer**, one of the eight original faculty members of the university's 26-yr-old medical center, has been made Richard T. Crane professor of medicine, and **William E. Adams** has been named James Nelson Raymond and Anna Louise Raymond professor of surgery.

The George Washington University Medical Society's annual award "for distinguished and meritorious service in the field of medicine or allied sciences" has been presented to **Joseph Hiram Roe**, head of the Biochemistry Department, for his "notable contributions in the fields of medical education, scientific research and public service."

The American Institute of Mining and Metallurgical Engineers has presented the Anthony F. Lucas Gold Medal Award for 1954 to **Bruce H. Sage**, professor of chemical engineering at the California Institute of Technology, "for his distinguished achievements in research."

**Ernest F. Swift**, formerly conservation director of the Wisconsin Conservation Department, has been made assistant director of the Fish and Wildlife Service of the U.S. Department of the Interior.

## Education

The Behavior Research Institute of the University of Louisville has been established under the administrative direction of R. A. Kemper; John B. Fink has been appointed research director. The Institute's operations will include basic and applied research functions. Research contracts will be invited from governmental and industrial organizations.

Commencing in the fall of 1954, Brown University will offer a program of instruction leading to the B.S. degree in applied mathematics. The curriculum is designed to train students to translate scientific problems into mathematical form and to develop skill in carrying out the resulting mathematical analysis. Such students are needed to formulate problems for the effective use in industry of the high speed electromechanical and electronic computing devices which are now becoming available. Brown was the first university in the nation to establish a teaching and research program devoted solely to applied mathematics, and now it becomes one of the first to offer undergraduate instruction in this field. In accordance with the new plan, the Graduate Division of Applied Mathematics will become the Division of Applied Mathematics.

During the first two years of this undergraduate program students will take courses in engineering, physics, and chemistry. In the junior and senior years, study will emphasize the application of mathematical methods to those fields. This work will go hand in hand with a series of courses in mathematics. There will also be elective courses designed to broaden educational experience and to encourage the study of other fields in which the application of mathematics offers opportunities. Inquiries should go to Prof. E. H. Lee, Chairman of the Division.

The Department of Chemistry of the Pennsylvania State University will offer a course in Chemical Microscopy, June 28–July 17, and a course in Chemical Photomicrography, July 19–Aug. 7. These courses are particularly suitable for those in industry and the universities who would like to spend some time in a mountain location hearing lectures, seeing demonstrations, doing laboratory work, and participating in miniature symposiums. Address all correspondence to Dr. Mary L. Willard, Whitmore Laboratory, Pennsylvania State University, State College.

The Department of Physics at Marshall College, will offer two courses in physics during the 1954 Summer Sessions designed especially for senior and junior high school teachers of physical and general science. The first course, titled "Physics education," is a review and extension of basic principles; particular stress will be given to materials and methods of demonstration. The second course, on "Electronics," will stress basic principles of electron tubes and circuits, together with applications in industry, medicine, and communications; some laboratory work will accompany this course.

Both of these courses extend through the two summer sessions, which are scheduled for June 1–July 9 and July 12–Aug. 20, respectively. These courses may be used for credit towards an M.A. degree under the Program for Teachers of Physical Science in the Graduate School. For further information, write to Dean of the Graduate School, Marshall College, Huntington, W. Va.

The anniversary of the discovery of streptomycin by Selman A. Waksman of Rutgers University a little more than 10 yr ago will be marked on June 7 with the dedication of the university's new \$3,500,000 **Institute of Microbiology**—a building made possible by the drug. Streptomycin has created a great new industry. Production in one year has nearly reached the \$100,000,000 mark. In the United States alone last year nine companies produced between 15 and 20 million grams a month. It is also manufactured in two plants in Great Britain; two in Spain; one each in Sweden, Denmark, and Germany; three each in France and Italy; four in Japan; and probably several in countries behind the Iron Curtain.

Royalties from the manufacture of streptomycin have amounted to more than \$4,000,000, of which more than 80 percent has been assigned to the Rutgers Research and Endowment Foundation. It is from these funds that the new building was constructed and equipped. Dr. Waksman long ago laid down the objective of the new Institute: "... particular attention will be devoted to the fundamental aspects of the study of microorganisms, their physiology, their biochemical activities and their relations to higher forms of life, notably man, and to his domesticated animals and plants."

The dedication will be followed by a 2-day symposium, June 8–9. More than 400 leading scientists from this country and abroad have been invited to this session which will have as its theme, "Perspectives and horizons in microbiology."

Michigan State College is offering a new program for obtaining the **master's degree in physics—entirely through summer session work**. Students or teachers with bachelor's degrees in physics, or equivalent training, may complete requirements for the M.S. degree by attending four successive 9-wk summer sessions.

S. P. Meadows of London, England—physician, Westminster Hospital Medical School; physician to out patients, National Hospital, Queen Square; and physician, Moorfields Eye Hospital—is to serve as visiting professor of neurology at the University of California School of Medicine, San Francisco, from May 2 to June 15. Dr. Meadows will give a series of lectures and demonstrations for both undergraduate and graduate groups.

The F. W. Olin Foundation has granted \$900,000 to **Bucknell University** for a science building. The Foundation was established in 1937 by Franklin W. Olin, well-known chemical manufacturer.

The four-story building will house the departments of chemistry, physics, and mathematics and will be known as the F. W. Olin Science Building.

The new **Pediatric Research Laboratory** at the **State University of New York College of Medicine**, Brooklyn, has been formally opened. A gift of \$4000 from the Junior League of Brooklyn provided most of the equipment for the new laboratory. The Department of Pediatrics is embarking on five new research projects this year, and the new equipment will be used chiefly for the one on diseases of the kidney.

The **Polytechnic Institute of Brooklyn** has announced its 11th annual series of **Summer Laboratory Courses**. These courses were instituted in 1944 as an experimental program for teaching modern laboratory techniques to meet the growing demand by scientists, particularly industrial scientists, for advanced instruction in the use of specialized physical tools in chemistry and physics. The Institute, realizing that industry could not spare its personnel for long periods, undertook to provide this instruction in a series of intensive one and two-week courses.

This year's schedule is as follows: June 28-July 2, "Progress in polymerization and copolymerization techniques"; July 12-16, "Properties of macromolecules in solution, including polyelectrolytes and other water soluble polymers"; Aug. 23-Sept. 3, "Industrial applications of x-ray diffraction." Address all inquiries to Mrs. Doris Cattell, Secretary, Summer Laboratory Courses, Polytechnic Institute of Brooklyn, 99 Livingston St., Brooklyn 1, N.Y.

A unique 5-yr **program in management and engineering**, combining the facilities of Stanford University and Claremont Men's College, will begin next fall on the campus of Claremont Men's College, Claremont, Calif. Students will take 3 yr at Claremont and 2 yr at the Stanford engineering school, and will receive bachelor degrees in arts and science. It is believed that the dual-degree program will perform a significant service to students by enabling them to test their abilities and arrive at a choice of career without waste of time or money. Admission to the Stanford School of Engineering will depend upon completion of the pre-engineering studies at Claremont. A certain number of scholarships and tuition grants will be available to applicants.

The Zoological Hospital and Biological Research Institute, located in San Diego's Balboa Park, has **research facilities available**. Built originally with funds donated by Ellen Scripps, there is a two-story structure with 10 individual research rooms, a darkroom, and two large animal rooms on the upper floor; and a reading room, secretary's office, animal quarters, and laboratories on the first floor. Back of the building is a large screened-in enclosure with isolation cages and catching chutes for large and small animals, and next to this area is a bird quarantine depot.

The Scripps Foundation has established a fellowship

of \$2500 annually, a stipend of \$2000 with \$500 for expenses. The fellow uses one of the research rooms on the upper floor of this building, but for the most part the balance of the space has been vacant from the day of the building's dedication by Kofoid in 1929.

Library facilities include the scientific libraries of the San Diego Natural History Museum, the Medico-Dental Building, the Rees-Stealy Clinic, the City General Library, a small collection in the zoo, the library of the Scripps Institution of Oceanography, University of California, and the library at San Diego State College. There is a Research Committee of 20 members, with Francis Smith, M.D. as chairman. This committee includes Carl Hubbs, Claude ZoBell, and Denis Fox of the Scripps Institution of Oceanography, faculty members from the State College, and many local scientists.

The Zoological Society of San Diego's income is not large enough to support a research staff, graduate fellows, or teachers coming for study purposes; therefore, the facilities of the building, the individual rooms, the animals and materials in the zoo, are all available to research workers without charge—to graduate students, postdoctoral fellows, or to teachers on sabbatical leave. Interested persons are urged to communicate with C. R. Schroeder, Managing Director, Zoological Society of San Diego, San Diego 12.

The **5th Summer Seminar in Statistics**, to be held at the University of Connecticut, Aug. 9-27, provides an opportunity for statisticians to meet people in industry, commerce, or the physical sciences. It is hoped that the statisticians will learn something of the statistical accomplishments and needs in the field of application, while those in application will discover some of the new and powerful methods of experimental statistics. The plan of the seminar is to have daily morning and afternoon sessions of about 2 hr each. An invited speaker will introduce a topic which will later be the subject of general discussion. The following men are organizing the programs in the areas given:

David Blackwell, Department of Mathematics, Howard University. "Statistical theories of choice."

Walter T. Federer, Department of Plant Breeding, Cornell University Agri. Exp. Sta., Ithaca, N.Y. "Applications of statistics in social research."

Max Woodbury, Department of Statistics, University of Pennsylvania. "Applications of statistics in meteorology."

John W. Tukey of Princeton University together with George Kimball of the Department of Chemistry, Columbia University will be organizers for the joint session with the Operations Research Society which will take place in the third week.

Interested persons are invited to attend for the day, week, or other period. The registration fee will be \$2.00 per week or \$5.00 for the whole seminar. Accommodations for a single person or for a family will be provided in one of the newest of the university dormitories at \$1.75 per day per person. Meals will be

available at a university cafeteria. A few grants covering board and lodging are available for graduate students. All inquiries should be addressed to Prof. Geoffrey Beall, Department of Statistics, University of Connecticut, Storrs.

About 500 American colleges and universities offering study beyond the bachelor's degree have been asked to participate in a **survey of financial support available to graduate students** being conducted by the National Science Foundation. This is one of a series of studies that the Foundation is making of all phases of the Nation's scientific activities, resources, and needs.

The questionnaire will be sent to all heads of graduate departments in the natural sciences, the social sciences, and the humanities. This will enable comparison of the amount of assistance available to graduate students in the sciences with that available in other fields. Plans for the graduate student study have been discussed with representatives of the National Research Council, Social Science Research Council, American Council of Learned Societies, the Office of Education of the Department of Health, Education and Welfare, and the American Council on Education, who agree on the importance of obtaining this information and who have expressed considerable interest in the results.

From the standpoint of the Federal Government, accurate information about the potential number of highly trained personnel is vital in considering the expansion of research resources, the present shortages in scientific manpower, and the recruitment of young scientists. Each educational institution has been asked to designate a member of its staff to gather information within the institution and to advise and consult with the Foundation in the study. Before issuing the questionnaire, the Foundation is pre-testing the questions at the George Washington University, the University of Pennsylvania, and the University of Indiana. The results of this pre-test survey will be incorporated with the final study.

The Graduate Division of Rensselaer Polytechnic Institute offers a two-semester program in **Technical Writing and Editing**. It is open to graduates in engineering or science and is designed to provide intensive instruction and practice in technical writing on a professional level, and to give further study in the student's chosen curriculum. The major course of study is offered by the Department of English with advanced courses offered by the graduate departments of engineering and science. For further information, address J. F. Morse, Director of Admissions, Rensselaer Polytechnic Institute, Troy, N. Y.

The University of Pennsylvania has announced the establishment of an **Institute of Neurological Sciences** designed to offer a broad and integrated approach in the study of the nervous system and to train teachers and research personnel in this biological field. The Institute invites application for fellowships to be awarded annually and to be made available to students

with diverse backgrounds seeking Ph.D. degrees in some phase of descriptive and experimental neurological sciences (embryology, anatomy, physiology, biochemistry, pharmacology, and physiological psychology). These fellowships offer a stipend of \$1200 to \$1800 per annum with tuition provided. Fellowships are also available for postgraduate investigators (Ph.D., M.D.), the stipends to be arranged according to need. Detailed information may be obtained from the office of the Director of the Institute of Neurological Sciences, Department of Anatomy, School of Medicine, University of Pennsylvania, Philadelphia 4.

## Grants and Fellowships

The Atomic Energy Commission has announced award of the 36 unclassified physical research contracts; six are new, and the remainder are renewals:

- University of Buffalo. G. M. Harris. Applications of isotopes in chemical kinetics, \$17,500.
- Columbia University. J. L. Kulp. Helium in the atmosphere and lithosphere, \$19,793.
- Franklin Institute. C. E. Mandeville. Neutron scattering measurements, \$30,000.
- Providence College. M. A. Fineman. Nature of gaseous negative ions formed by electron impact, \$4534.
- Rutgers University. E. R. Allen. Anionic complexes and polymers of the oxy-acids of some of the transition elements, \$4179.
- University of Texas. E. W. Steel. Effects of biological slimes on sea water, \$7884.
- Alabama Polytechnic Institute. H. E. Carr. Mass spectrometry research.
- Bausch & Lomb. N. J. Kreidl. Irradiation damage to glass, \$10,000.
- University of Buffalo. S. Mrozowski. Basic principles of manufacture of carbons, \$27,530.
- Carnegie Institute of Technology. R. B. Sutton. 400-mev synchrocyclotron and associated research, \$400,000.
- Case Institute of Technology. E. Shrader. Reactor studies.
- University of Colorado. J. R. Lacher and J. D. Park. Thermochemical studies of organic fluorine compounds.
- Duke University. D. G. Hill. Some chemical reactions at high temperature, \$3640.
- Harvard University. E. S. Barghoorn. Assay of occurrence and intensity of radioactivity in uraniferous plant fossils of various geologic ages and from diverse parts of the world, \$5864.
- Harvard University. G. Wilkinson and R. M. Diamond. Nuclear and inorganic chemistry of the transitional elements, \$15,105.
- University of Illinois. F. Seitz. Mechanism of substitutional diffusion in metals, \$24,439.
- University of Illinois. P. A. Beck. Annealing of cold worked metals, \$21,100.
- Johns Hopkins University. G. H. Dieke. Absorption and fluorescent spectra of solid uranium compounds, \$38,248.
- Massachusetts Institute of Technology. A. M. Gaudin. Techniques in mineral engineering, \$72,000.
- Massachusetts Institute of Technology. M. B. Bever. Thermodynamics of metallic solutions, \$32,500.
- Massachusetts Institute of Technology. M. Cohen and B. L. Averbach. Solid solutions and grain boundaries, \$36,800, and fundamentals of cold work and recrystallization, \$28,300.
- University of Michigan. H. R. Crane. Nuclear research with 300-mev synchrotron, \$85,000.
- University of Michigan. W. W. Meinke. Nuclear chemical research, \$20,709.
- University of New Hampshire. H. M. Haendler. Infra-red spectroscopy of inorganic fluorides, \$8385.
- Oregon State College. E. A. Yunker. 37-in. cyclotron project, \$12,117.
- Pennsylvania State University. C. R. Kinney. Chemical nature of the organic matter of uraniferous shales, \$10,375.
- Princeton University. M. G. White. 18-mev cyclotron and associated nuclear physics research, \$120,418.
- Purdue Research Foundation. W. H. Johnston. Gas phase exchange reactions, \$15,000.



Rensselaer Polytechnic Institute. H. B. Huntington. Anisotropic diffusion in metals, \$9160.

Rensselaer Polytechnic Institute. H. M. Clark. Extraction of inorganic substances by organic solvents, \$7100.

University of Rochester. E. W. Wilg. Radiochemistry, \$12,860.

Rutgers University. E. R. Allen. Polar inorganic molecules, \$10,984.

University of Texas. E. L. Hudspeth. Nuclear research with the Van de Graaf generator, \$24,000.

University of Utah. A. L. Wahrhaftig. Ionization and dissociation of molecules by electron bombardment, \$10,500.

Vanderbilt University. E. A. Jones. Raman spectra of some inorganic fluorine compounds, \$7200.

Yale University. H. L. Schultz. Electron linac and neutron velocity selector, \$99,225.

Yale University. W. W. Watson. Isotope separation by thermal diffusion and nuclear studies with separated isotopes, \$11,000.

At its meeting on Apr. 14 the **American Academy of Arts and Sciences**, Boston, made the following six grants:

Columbia University. H. R. Ansley, Dept. of Zoology. Field trip to Panama Canal Zone to collect a tropical pentatomid for extending a study of protein factors in chromosome pairing at the chemical level, \$500.

R. Bearse, Boston, Mass. Support of expedition to make meteorological and glaciological observations on the Greenland ice cap, \$1000.

Brandeis University. S. G. Cohen. Assistance in study of asymmetric reactions of nonasymmetric molecules, to gain understanding of related enzymatic processes, \$1500.

Vincent Memorial Hospital. R. M. Graham, Cytology Laboratory. Color-translating projector for a study of ultraviolet microphotographs of benign and malignant epithelial cells in the vaginal smear, \$500.

Harvard University. A. B. Lord, Dept. of Slavic Languages and Literatures. Transcribing the Milman Parry recordings of Serbo-Croatian oral epics in an anthropological approach to the problems of composition and transmission of oral epic, \$925.

Harvard University. C. R. McGimsey III. Archaeological field trip to establish a chronological and distributional foundation for Panamanian prehistory, \$950.

## Meetings and Elections

The **American Psychopathological Association** will meet June 4-5 at the Park Sheraton Hotel, New York. The topic of this year's symposium is: "Psychopathology of childhood." Among the psychologists who will contribute to this symposium is Jean Piaget.

The first **Canadian Cancer Research Conference** will be held at Honey Harbour, Ont., June 16-19. Sponsored by the National Cancer Institute of Canada, this conference is primarily designed to encourage a review of present knowledge on various aspects of cancer for the benefit of grantees of the Institute. The topics to be discussed include carcinogenesis, enzyme relationships, tumor host relations, and the effects of radiation. Since accommodations are limited, attendance must be by application only. Further information may be obtained from Dr. Robert L. Noble, Collip Medical Research Laboratory, University of Western Ontario, London, Ont., Canada.

Donald Rogers of the New York Botanical Garden is cooperating with the Sabena Belgian Airlines, 422 Madison Ave., New York, in arranging two flights reserved especially for scientists planning to attend the **8th International Congress of Botany** in Paris, July

2-14. Anyone wishing accommodations should communicate with Sabena immediately while space is still available. The flights have been scheduled for June 27 and 28 on Super DC-6B's, but it is possible to arrange to leave on other dates. The round-trip fare is \$558.00, and this includes travel to Brussels, Amsterdam, Manchester, London, Antwerp, or to several other European cities if desired.

Of particular interest to individuals and organizations concerned with applications of high vacuum technology is the **High Vacuum Symposium** to be held June 16-18 at the Berkeley-Carteret Hotel, Asbury Park, N.J. The symposium is being sponsored by the Committee on Vacuum Techniques, a recently formed nonprofit organization that represents industries employing vacuum processes, universities engaged in high vacuum research, and manufacturers of vacuum equipment.

The program, comprising approximately 25 technical papers, will include discussion of nomenclature and standards; new equipment and instruments; fundamental developments in vacuum technology; methods and techniques; applications and processes. In planning the program, care has been taken to include subjects of practical as well as theoretical importance. Those interested in attending should write to the Committee on Vacuum Techniques, Box 1282, Boston 9, Mass.

The Chemical and Radiological Laboratories of the Chemical Corps, at the Army Chemical Center, Md., has planned a symposium on "**Incendiary gels and their instrumentation**" to be held June 21-22. It should be of interest to industrial organizations engaged in the manufacture of metallic soaps, and to research groups working in the fields of gel structure and rheology. The meeting is open to all American citizens, but the classified program on the second day can be attended only by persons with security clearance through "Confidential" because certain performance characteristics will be discussed. Applications should be addressed to R. Macey, Chairman, Symposium VI, Office of the Chief Chemical Officer, Department of the Army, Washington 25, D.C. *Admission will be by invitation only.*

The **5th International Symposium on Combustion** will be held in Pittsburgh, Aug. 30-Sept. 3. This symposium is organized under the auspices of the Standing Committee on Combustion Symposia and the University of Pittsburgh will serve as sponsor and host. Further information is available from the Director of the Summer Session, University of Pittsburgh, Pittsburgh 13, Pa., or from Dr. Bernard Lewis, Alcoa Building, Pittsburgh 19, Pa.

An **Oceanographic Convocation** to encourage the presentation and discussion of stimulating ideas and creative work in the broad field of oceanography is being planned by the National Academy of Sciences-National Research Council and will be held at Woods



Hole, Mass., June 22-24. The Convocation is sponsored jointly with the Office of Naval Research and will follow the dedication of a new laboratory for oceanographic research on June 21. The occasion presents a timely and challenging opportunity for significant furtherance of the science of oceanography. It is anticipated that the presentations will stress the broad scientific significance of oceanography, its needs and potentialities, and its relations to constituent fields of science.

Thirty distinguished scientists, both from this country and from abroad are being invited to present papers. The 3-day program will consist of two sessions on physical oceanography, two on biological oceanography, one on geology and geophysics in oceanography, and one on meteorology in oceanography. The steering committee that is planning the program includes D. W. Bronk, *chairman*; P. B. Armstrong, H. B. Bigelow, C. Eckart, R. H. Fleming, G. E. Hutchinson, B. H. Ketchum, D. Merriman, D. W. Pritchard, and L. A. Walford. For further information write to H. R. Gault, Division of Earth Sciences, National Research Council, Washington 25, D.C.

The **Society of Women Engineers** held its 1954 national convention in Washington, D.C., Mar. 5-7. The theme of the convention was "The woman engineer in a peace-time economy." The convention activities started with several field trips to stations of technical interest in the Washington area. Olive Mayer of Product Design Company, Redwood City, Calif., presided over a morning session that included the presentation of technical papers by various members of the Society. Olive Dennis, retired engineer of the B. & O. Railroad, discussed "Railroading with the woman's viewpoint." "The story of an aluminum piston" was presented by Virginia Sink of the Chrysler Corp., and "More ways than one," a paper on communications, was given by Mary Murphy of the Illinois Bell Telephone Company. Hazel Bishop of Hazel Bishop Laboratories spoke at the luncheon meeting on "Cosmetics is a woman's business."

Catherine Eiden, engineer of Illinois Bell Telephone Company, was chairman of an afternoon session devoted to a symposium on "Tools of industry." The speakers included Grace Hopper, systems engineer of Remington Rand, Inc., on the topic "The compiler technique for digital computers"; Ralph Slutz, consultant in the Electronics Division of the National Bureau of Standards, on "The electronic computer—a new tool for the mind"; Henry Marschalk, head of the Publications Branch of the Bureau of Ordnance, Department of the Navy, on "Good technical manuals; their place in our national economy"; and Helen E. Smith, senior engineer of Philco Corporation on "Woman's work is never done," a discussion of home appliance engineering. At the reception and banquet the main speaker was A. V. Astin, director of the National Bureau of Standards, who spoke on "The development of engineers." The Society's annual Award for Meritorious Contribution to Engineering was presented to Edith

Clarke, for many years electrical engineer for the General Electric Company and at present professor of engineering at the University of Texas.

Chairman of the banquet session was Ethel Levene, materials engineer in the Bureau of Ships, Navy Department, who was also chairman of the Convention Committee. The formal sessions of the convention were concluded with a "brunch" and open membership meeting presided over by Katharine Stinson, president of the Society and chief of the Specifications Staff of the Civil Aeronautics Administration.

Thirty-five leading authorities on the atom and its potential use as a source of power met at Columbia University Apr. 22-24, for a "**Summer Institute on Nuclear Physics in Engineering Education**." The group of 21 educators, 9 government scientists, and 5 industry representatives held a closed conference to lay the groundwork for a larger open conference scheduled for Sept. 7-11 at Northwestern University. Both conferences are jointly sponsored by the American Society for Engineering Education, the American Institute of Physics, the National Science Foundation, Columbia University, and Northwestern University.

Under the chairmanship of Charles F. Bonilla, professor of chemical engineering at Columbia, the preliminary meeting considered ways of bringing about closer coordination between the teaching of physics and of engineering, particularly in the field of nuclear power. It is felt that this field can reach its full potentialities only when engineers understand the theory behind it as well as its practice.

Certain general conclusions were reached at this preliminary conference that will make the larger open conference of 150 engineers and physicists in September more productive. Final decisions will be made at the latter meeting.

"Clay Mineral Technology" is the theme of the **Third National Clay Minerals Conference** to be held at the Rice Institute, Houston, Tex., Oct. 27-29. The conference is sponsored by the Clay Minerals Committee of the National Research Council. A part of the program will be devoted to fundamental or applied papers. Anyone interested in presenting papers in any of these or other fields pertaining to clays or related minerals is invited to communicate with A. F. Fredrickson, Washington University, St. Louis, *on or before July 15*. A detailed program, including field-trip information, will be available on request in August.

A symposium, "**Twenty-five years of progress in mammalian genetics and cancer**," will be held at the Jackson Memorial Laboratory, June 27-30, as a part of its 25th anniversary activities. The program will include the following sessions: "Inbred strains as research tools," with papers by Thelma B. Dunn and John W. Gowen, and a talk on the development of mammalian genetics by W. E. Castle; "Genetic control of developmental patterns," with contributions from Earl L. Green, Meredith Runner, and Salome Glucksohn-Waelsch; "Genetic control of function," with

contributions from Herman B. Chase, Elizabeth S. Russell, and George D. Snell; "Carcinogenesis in endocrine organs," a round-table discussion including Jacob Furth, W. V. Gardner, K. P. Hummel, and G. W. Woolley; "Genetic control of behavior," with papers by Curt Richter, J. Paul Scott, and L. H. Snyder; "Genetic techniques in the study of cancer: new approaches," with speeches by Margaret Dickie, A. B. Griffen, W. E. Heston, and Lloyd Law; and a final summary discussion, "Patterns of mammalian gene action," by Sewall Wright. All persons interested in attending this symposium should write to Dr. Elizabeth S. Russell, Scientific Director, Jackson Memorial Laboratory, Bar Harbor, Me.

## Miscellaneous

Following the advice of professional and industrial consultants, the 1953 program of the **Future Scientists of America Foundation** of the National Education Association, 1201 16th St. NW, Washington 6, D.C., was focused on the preparation of a survey of teachers' opinions and experiences with sponsored incentive programs and guidance materials and services. The report of this inventory, "Encouraging Future Scientists: The Situation," is available gratis. This study revealed that many teachers are simply not sufficiently informed to allow them and their students to take part in the programs and services that are available.

In light of this, for the second major phase of its 1953 program, the Foundation prepared "Encouraging Future Scientists: Available Materials and Services." This publication provides for secondary school science teachers and their students the information needed to enable them to participate in sponsored incentive programs and guidance services. This pamphlet sells for 50 cts. Science supervisors, counselors, instructors in teacher training institutions, and other key people who are interested in placing quantity orders may receive free copies by explaining their interest.

The **International Development Placement Association, Inc.**, of 345 E. 46 St., New York 17, has scientific positions listed. This is a nonprofit organization whose primary function is to find qualified persons for foreign development programs who cannot be obtained through existing channels of international recruitment. It aims its appeal toward those who are eager to serve where trained persons are needed and who are willing to work at local salaries and under local conditions. Its services are rendered without fee.

Over a period of years, medical research in the United States has assumed such proportions that a force of no less than 250 medical journals is required to report it. This places a burden on the busy physician anxious to keep informed of current developments. To assist him, the magazine *Medical Abstracts*, 825 Western Saving Fund Bldg., Philadelphia 7, Pa., has been founded and early this summer will begin publication.

Each month the editors plan to abstract articles of general interest to the medical profession from about 200 of the leading domestic and foreign journals. Each abstract, which will be about two or three column-inches in length, will cite the author, the date, and the name of the journal.

In a recent report to the American College of Surgeons, William B. Looney, Lt. (MC) USNR, of the radioisotope laboratory, U.S. Naval Hospital, Bethesda, Md., issued a **nation-wide call** for anyone who, 20-30 yr ago, was treated by injection or by swallowed doses of radium salts or mesothorium or radiothorium. Also wanted are those who got any of these radioactive materials into their bodies in diagnostic tests or through painting luminous dials. These people may still have small amounts of radioactive substances in their bones or internal organs that may or may not be doing significant damage. Knowledge of how these people are getting along is needed to help determine the long-term effects of small amounts of radioactive substances to which more and more people in the present age are exposed.

The May issue of *The Scientific Monthly* carries these articles and letters: "Lyman J. Briggs: recognition of his eightieth birthday," Wallace R. Brode; "Lyman J. Briggs and atomic energy," Vannevar Bush; "Some problems in national and international standards," E. C. Critenden; "Spontaneous freezing of water," N. Ernst Dorsey; "Supersonic travel within the last two hundred years," Hugh L. Dryden; "Earth, sea, and sky: twenty years of exploration by the National Geographic Society," Gilbert Grosvenor; "Gravitation—still a mystery," Paul R. Heyl; "The measurement of soil water in relation to plant requirements," L. A. Richards; "Mind, matter, and freedom," Charles Hartshorne; "Men's different production rate at different ages and in different countries," Harvey C. Lehman; "Find more good scientists—and support their work," Paul E. Klopsteg.

Among the resolutions passed on during the 1952 General Assembly of the International Union of Pure and Applied Physics in Copenhagen, there was a recommendation that action should be taken to publish papers reviewing the work done in various fields of experimental and theoretical physics and available only in Russian and other slavonic languages. The actual organization of the work, at the suggestion of the Publication Committee of the I.U.P.A.P., was taken up by the permanent secretariat of the International Council of Scientific Unions Abstracting Board, 3, Boulevard Pasteur, XV<sup>e</sup>, Paris. As a result, the Italian journal of physics, *Il Nuovo Cimento*, has announced publication of *Supplemento al Volume X, Serie IX del Nuovo Cimento* which is entirely devoted to reviews of the works of Russian physicists. Copies may be obtained from Nicola Zanichelli Editore, Via Irnerio N.46, Bologna, or from Prof. G. Polvani, Director, Via Saldini N.50, Milano.